REMARKS

Applicant has amended the above-identified application responsive to the Office Action dated February 27, 2002.

In brief, Applicant has carefully amended the claims to distinguish the present invention over the prior art teachings of the Hand 3,544,113 and Glovak 4,151,997 references. In particular, claims 1, 5 and 9 have been amended, claim 4 cancelled and new independent claim 10 added. Accordingly, claims 1-3 and 5-10 remain pending in the application.

Hand was cited in both anticipation and obviousness rejections of claims 1 and 4 and claims 3 and 5-8, respectively. Hand teaches a set of disks exhibiting different floatation characteristics, and in particular which includes distinctive floatable and non-floatable disk assemblies. The buoyancy of the floating and controlled sinking members is further disclosed as being varied by changing a structural characteristic of the body assembly.

The Examiner asserted the position, in the remarks section on pages 2 and 3 of the Office Action, that Hand disclosed in particular the three dimensional body in relevant part defined by upper and lower elliptically extending faces (41, 42) and a hollow interior cavity (at 57 in the variant of Fig. 5). With reference further to the obviousness rejections, the Examiner stated that it would have been obvious to one of ordinary skill in the art to form the width to form the skipping article of Hand with the instantly claimed dimensions as the Applicant has not shown the criticality by a new and unexpected result and it appears that the dimensions shown by Hand would accomplish similar purposes.

Applicant respectfully disputes the Examiner's assertions as to the Hand reference and further notes the particular recitations incorporated by amendment into both independent claims 1 and 9 of the present application. In particular, claim 1 now further recites such

features as the substantially smooth edged and elliptical outer perimeter of the three-dimensional body, as well as the interior cavity of the body further being defined by the likewise substantially elliptical and interiorly extending surfaces. As to claim 9, the substantially same features, namely the mirroring elliptical surfaces associated with both the three-dimensional exterior of the body as well as the exterior surfaces defining the interior cavity, are again present.

In contrast, Hand teaches a device for use in water games (see column 1, lines 19-26 and column 2, line 18). The device in Hand is further indicated as being continually reusable, such being further supported by the continual reference to preferred embodiment being constructed of plastic (column 2, lines 11, 28 and 38). As is clear from the disclosure and amended independent claim 9, the present invention discloses the provision of a three-dimensional water skipping article constructed of a biodegradable or environmentally inert material, the purpose for which being that the disk is a single use, non-retrievable item.

Of more specific note, the water skipping article, as now recited in amended claims 1 and 9, discloses that both the exterior upper and lower faces as well as the corresponding inner upper and lower faces defining the interior cavity, are configured in elliptically shaped fashion. As to the outer elliptical faces, they converge into an elliptical and perimeter extending edge.

In contrast, Hand teaches a two-piece device or "set of disks" capable of being disassembled by the user and reassembled into different configurations. More to the point, and notwithstanding the Examiner's assertions to the contrary, it is respectfully submitted that the outer faces (41 and 42) in Fig. 5 of Hand are not elliptical surfaces. Nowhere in the disclosure of Hand is it stated or supported that the faces 41 and 42 are elliptical in shape and neither can this assertion be supported with reference to the two-dimensional side view

shown in Fig. 5 of Hand. Furthermore, Hand only discloses that the outer faces are "rounded", from which the assertion of them being elliptical is drawn. It is further respectfully disputed that the air pocket 57 defined by the concave surfaces 49 and 55 identified in Hand (see Fig. 5 variant) does not disclose the creation of inner elliptical surfaces as recited in the claims of the present application.

The elliptical configuration of both the upper and lower outer extending faces in the present invention, as well as those of the upper and lower surfaces defining the interior cavity, provides the water skipping device of the present invention with enhanced performance characteristics, both in terms of length of flight and incidence of skipping upon a water surface. Additionally, the provision of the smooth edged elliptical outer perimeter (again recited in both amended claims 1 and 9) is not taught by Hand which instead shows either a pointed outer edge (see 45 in Fig. 5) or provision of such as a cushioning ring placed about the annular outer edge of an assembled pair of disk members. The present invention further provides an integral, one-piece, and environmentally inert biodegradable article not taught by Hand.

The advantage of the elliptical configuration of the present invention, and as clearly supported by the present disclosure, is that it provides the leading edge with an airfoil. The further effect of the outer and inner elliptical configuration of the water skipping article, as also recited in independent claim 10, is that the alternating ratio of the inner elliptical configuration contributes to the "centrifugal forces" applied to the corresponding and outer elliptical configuration of the article, the net result being an increased number of incidences of the article contacting the water in a skipping fashion, the additional effect being the creation of a gyroscopic effect to the device of the present invention, not present in Hand.

With further regard to Glovak, Applicant repeats in substance the arguments and distinctions previously presented. Furthermore, it is respectfully submitted that Glovak, while teaching the provision of a hydroplaning disc constructed of sand with a water soluble organic binder, does not teach or suggest the elliptical outer and inner configurations of the water skipping article with interiorly defined cavity as set forth in the claims of the present invention. Rather, Glovak teaches a solid disk shaped element of unrelated configuration in comparison to the elliptical configuration of the present invention. Further, there is no teaching or suggestion in either Glovak or Hand which arguably supports combining the references together in a rejection of claims in the present application.

It is respectfully submitted that, in view of the above amendments to the claims and arguments presented herein, the present application is now in appropriate form for allowance and such action is respectfully requested. Attorney for Applicant may be contacted at (248) 647-6000 with any questions the Examiner may have.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with Markings to Show Changes Made."

Respectfully submitted,

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Judith I. Lange

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claim 1 has been amended as follows:

1. (Amended) A water skipping article, comprising:

a three-dimensional body having a substantially [circular] smooth edged and elliptical circular outer perimeter, said body further including a side profile defined by upper and lower elliptically extending faces which converge into said [circular] outer perimeter, and

said body exhibiting a smooth and continuous exterior surface and further defining a hollowed and interior cavity suspended within said body, said body further including substantially elliptical and interiorly extending surfaces defining said interior cavity;

wherein, upon a user launching said article in a substantially horizontal trajectory and with a specified rotational spin, said interior cavity causing centrifugal forces to be applied to said outer perimeter of said article and said elliptically extending faces increasing individual incidences of said article contacting a water surface.

Claim 4 has been canceled.

Claim 5 has been amended as follows:

5. (Amended) The water skipping article as described in claim [4] 1, said elliptical interior cavity further having a specified width to thickness ratio of at least 2:1.

Claim 9 has been amended as follows:

9. (Amended) A water skipping article for use by a user in launching the article in a substantially horizontal trajectory and with a specified [rotation] rotational spin, said article comprising:

a three-dimensional body constructed of a material selected from the group including biodegradable [material] materials and environmentally inert materials and having an elliptically shaped smooth and continuous exterior surface with a substantially [circular] elliptical and smooth edged outer perimeter, said body further including a side profile defined by upper and lower elliptically extending faces which converge into said [circular] outer perimeter; and

said body further defining a hollowed, substantially elliptical and interior cavity suspended within said body, said interior cavity causing centrifugal forces to be applied to said outer perimeter of said article, upon launching by said user and increasing individual incidences of said article contacting a water surface in a skipping fashion.

New claim 10 has been added.